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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,544	09/19/2003	Scott A. George	75622P006101	5556

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EXAMINER

SINGH, RAMNANDAN P

ART UNIT PAPER NUMBER

2614

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,544

Applicant(s)

GEORGE, SCOTT A.

Examiner

Ramnandan Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Preliminary Amendment

1. Preliminary amendment filed on April 12, 2006 is approved.

Double Patenting--I

2. ANALYSIS-I:

To demonstrate that the co-pending application S/N: 10/664,596 and the instant application S/N: 10/666,544 are claiming the same invention, a brief analysis is presented below:

(i) Claim 6 of Instant Application: S/N: 10/666,544:

An apparatus for generating a subscriber line ringing signal, comprising: a power supply providing a time-varying supply level $W(t) = \text{vertline.f(t)-C.vertline.} + C + D$, wherein D is a power supply offset, wherein $C \neq 0$; a linefeed driver; and a signal processor, wherein when $W(t) \geq K$ the signal processor controls the linefeed driver to toggle between 1) coupling $W(t)$ to a tip line while coupling a ring line to an alternate supply, $V_{\text{sub.ALT}}(t)$, and 2) coupling $W(t)$ to the ring line while coupling the tip line to $V_{\text{sub.ALT}}(t)$, wherein K is a pre-determined switching threshold.

(ii) Claim 32 (Amended) of Co-pending Application S/N: 10/664,596:

An apparatus for generating a subscriber line ringing signal, comprising: a power supply providing a time-varying supply level $W(t) = \text{vertline.f(t)-C.vertline.} + C + D$, wherein D is a power supply offset; a linefeed driver; and a signal processor, wherein when

W(t).Itoreq.K the signal processor controls the linefeed driver to toggle between 1) coupling W(t) to a tip line while coupling a ring line to an alternate supply, V.sub.ALT(t), and 2) coupling W(t) to the ring line while coupling the tip line to V.sub.ALT (t), wherein K is a pre-determined switching threshold.

3. Clearly, Claim 6 of the instant application S/N: 10/666,544 is **identical** to claim 32 of co-pending application S/N:10/664,596.

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claim 6 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 32 of copending Application S/N: 10/664,596. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Double Patenting-II

5. ANALYSIS-II:

(i) Claim 10 of Instant Application: S/N: 10/666,544:

A method of generating a differential ringing signal with a DC component between a tip and a ring line of a subscriber line, comprising: a) providing a time-varying supply level, $W(t)$, having a plurality of critical points along a folding line, wherein the critical points are substantially not equidistant; b) coupling $W(t)$ to the tip line while coupling an alternate source to the ring line in response to a first critical point; and c) coupling $W(t)$ to the ring line while coupling the alternate source to the tip line in response to a second critical point.

(ii) Claim 22 (Amended) of Co-pending Application S/N: 10/664,596:

A method of generating a differential ringing signal between a tip and a ring line of a subscriber line, comprising: a) providing a time-varying supply level, $W(t)$, having a plurality of critical points along a folding line, wherein the critical points are substantially equidistant; b) coupling $W(t)$ to the tip line while coupling an alternate source to the ring line in response to a first critical point; and c) coupling $W(t)$ to the ring line while coupling the alternate source to the tip line in response to a second critical point.

6. Clearly, Claim 10 of the instant application S/N: 10/666,544 is similar to claim 22 of co-pending application S/N:10/664,596 except for a DC component.

7. Additional feature, a DC component, appended to claim 10 of the instant application is being obvious over Apfel [US 20040174992 A1].

Apfel teaches a waveform power supply signal upon the ringing signal, wherein the power supply supports unbalanced ringing with a DC offset (i.e. a DC component) [Fig. 3; Para: 0032-0040; 0011; 0013-0016; Abstract].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Apfel with the claimed invention of the copending application in order to provide a DC offset voltage to detect ring trip [Apfel; Para: 0012].

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 10-13, 1-5, 14-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-25, 1-21 and 26-31 of co-pending application S/N:10/664,596. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 22-25 of co-pending application S/N:10/664,596 are a broader version of claims 10-13 of the instant application as shown above. Similarly, claims 1-21 and 26-31 of the co-pending application S/N:10/664,596 are a broad version of claims 1-5 and 14-29 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

10. Claims 1-29 would be allowable if rewritten or amended to overcome the rejection(s) of Double Patenting, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter:

Independent claim 14 identifies the uniquely distinct feature of a subscriber line differential ringing generating apparatus having a DC component between a tip and a ring, comprising: switch circuitry coupling the tip line to a time-varying power supply $W(t)$ having a plurality of non-equidistantly spaced critical points while coupling the ring line to an alternate source when in a first state, wherein the switch circuitry couples the tip line to the alternate source while coupling the ring line to $W(t)$ when in a second state; and a signal processor toggling the switch circuitry between the first and second states in response to the critical points. As such, claim 14 requires a time-varying power supply $W(t)$ having a plurality of non-equidistantly spaced critical points wherein a signal processor toggles a switching circuitry between a first state and a second state in response to the critical points. While the closest prior art, Caine et al [US 6,735,302 B1], Apfel [US 20040174992 A1], and Legrety, Inc.[2002, VoiceChip Le9502], each teach generating differential ringing signals, Caine using a DSP control, Apfel using a constant power supply, and Legrety using a switcher controller; none of them suggest or utilize a time-varying power supply $W(t)$ having a plurality of non-equidistantly spaced critical points wherein a signal processor toggles a switching circuitry between a first state and a second state in response to the critical points. As such, the prior art, either singularly, or in combination, fail to anticipate or render the above underlined limitation obvious. Therefor, claim 14 is indicated allowable.

Claims 1, 6, 10, 19 and 23 are essentially similar to claim 14 and hence are indicated allowable.

Claims 2-5 being dependent from claim 1, claims 7-9 being dependent from claim 6, claims 11-13 being dependent from claim 10, claims 15-17 being dependent from claim 14, claims 20-22 being dependent from claim 19, and claims 24-29 being dependent from claim 23 are also indicated allowable.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramnandan Singh
Examiner
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A handwritten signature in black ink, appearing to read 'R Singh', is written over the printed name and title of the examiner.